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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/959,149	10/28/1997	RODNEY LIMPRECHT	3382-47280	4269

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EXAMINER	
LAO, SUE X	
ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 06/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

JR

Office Action Summary

Application No.	Applicant(s)
08/959,149	Limprecht, et al
Examiner	**Art Unit**
S. Lao	2151

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jan 24, 2002* .

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) *1-4, 8-10, 15-17, and 22-28* is/are allowed.

6) ☒ Claim(s) *5, 6, 11-13, and 18-21* is/are rejected.

7) ☒ Claim(s) *7 and 14* is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. Claims 1-28 are pending. This action is in response to the amendment filed 9/7/2001 and the appeal brief filed 1/14/2002. Applicant has amended claims 8, 15 and 18 and added claims 25-28.

2. The finality of the rejection of the last Office action is withdrawn in view of applicant's arguments filed 1/14/2002.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites "wherein the *indication is a call from the client* to commit or abort a transaction encompassing the work" in line 1-2, which conflicts with claim 5 which recites "*responsive to an indication* ... to destroy the application component's state ... *without action by the client*" on line 9-12 (emphasis added). Apparently as claimed, the indication is the client call, ie, an action by the client, thus the destruction is not without action by the client.

5. Claims 13, 18-21 is rejected under 35 U.S.C. 103(a) as being unpatentable over The Common Object Request Broker: Architecture and Specification CORBA (Revision 2.0) in view of Steinman ("Incremental State Saving in SPEEDS Using C++") and Hamilton et al ("Subcontract: A flexible base for distributed programming").

As to claim 21, CORBA teaches (chapter 4, pages 12-16) server applications (servers, applications), executing (invoke) an application component (object) under control of an operating service (ORB), the application component having a state (context) and

function code (method) for performing work responsive to a call (invoke method) from a client (client), destroying the state by the operating service (delete context object by CORBA::CTX_DELETE()). It is noted that a destroyed state in CORBA is not persistent.

CORBA does not teach (1) the step of maintaining, (2) destroying is in response to an indication from application component without action by the client.

As to (1), Steinman teaches (SPEEDS system) maintaining an object state (v1) in main memory between method invocations (between events/messages/method calls, by delta exchange method), see sections 3, 4. Given the teaching of Steinman, it would have been obvious to maintain an object state in main memory between method invocations. One of ordinary skill in the art would have been motivated to apply the teaching of Steinman to CORBA because it further improves the resource efficiency by reducing the overhead of state savings (Steinman, page 695, left col., last para.). It is noted that Steinman maintains object state without requiring an indication that work is complete.

As to (2), Hamilton teaches destruction of a state (discard state) of an application component (server object) is controlled by the server without waiting for consent from the client. See page 74, section "Revoking an object". Given the teaching of Hamilton, it would have been obvious to destroy the state of the application component in response to an indication from application component but without action by the client. One of ordinary skill in the art would have been motivated to apply the teaching of Hamilton to CORBA because it permits orderly introduction of new properties and new implementations (Hamilton, abstract) which is a primary purpose of CORBA.

As to claims 18 and 13, note discussion of claim 21 and note the equivalence of discarding / destroying, and before receiving / without action by the client. CORBA further teaches (chapter 4, pages 12-16) system service (ORB) for creating and destroying. CORBA teaches (chapter 2, page 9, section 2.1.11) instance creation service (object activation), client request (request), returning a reference (generate object reference). Typically in CORBA, a client calls a object / component function indirectly by calling a stub / object adapter to initiate work (invoke object) via the run-time/system service (ORB, including object adapter) and using the reference. CORBA further teaches encapsulating

function code (object method) and a processing state (context) for the work in a component (context object), providing a reference (object reference) through an operating service (CORBA) for a client program to call the function code of the component to initiate processing (invoke method) (see discussion of claim 21 with respect to CORBA).

Regarding destroying processing state responsive to indication from the application without action from the client, this is met by Hamilton (server object decides and destroys its state using the subcontract facility without client's consent) (Hamilton, page 74, section Revoking an Object). It is noted that work completion is a typical point of system resource scheduling/re-scheduling, and thus it would have been obvious for the server to exercise its control on the state at this juncture. Note discussion of claim 21 for a motivation to combine.

As to claims 19-20, holding a reference and releasing a reference are part of the conventional object creation and destruction. Further, CORBA as modified teaches (Steinman) resetting the state (restore state by calling exchange again, section 4). The factory mechanism of CORBA produces a component/object instance and its pointer. When an object is reused, its state is typically reset/reinitialized.

6. Claims 1-5, 7-12, 15-17 and 22-28 are allowed.

7. Claim 14 is objected to as being dependent upon respective rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Applicant's arguments filed 1/24/2002 have been considered but are moot in view of the new ground(s) of rejection.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (703) 305-9657. A voice mail service is also available at this number. The fax phone numbers for the

organization where this application or proceeding is assigned are (703) 746-7238 for After Final communications, (703) 746-7239 for Official communications and (703) 746-7240 for Non-Official/Draft communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Sue Lao SXL
June 14, 2002